

Serial No. 10/689,986

REMARKS

Claims 1-4, 6, 8-15, 17-20, 26-31, 33-36, 40-51, and 53-56 are pending. Claims 1, 4, 6, 8, 9, 15, 17, 20, 26, 27, 33, 36, 40, 41, 49, and 50 have been amended, claims 7, 22-25, 37-39, and 52 have been canceled, and new claim 56 has been added. It is respectfully submitted that entry of this paper is proper, as none of the amendments presented herein raise new issues requiring further consideration or searching by the Examiner and the number of new claims added does not exceed the number of claims canceled.

Reconsideration of the application is respectfully requested for the following reasons.

I. The Rejection under 35 USC § 112, Second Paragraph.

Claims 6-13 and 22-29 were rejected on grounds that claims 6 and 22 depend from claims that were previously canceled. Claim 6 has been amended to depend from claim 1 and claim 22 has been canceled. It is respectfully submitted that these amendment are sufficient to overcome the § 112, second paragraph, rejection.

II. Allowable Claims.

In the Final Office Action, claims 9-13, 25-29, 39-43, 49, and 52 were indicated to be allowable if re-written into independent form to recite the features of their base and intervening claims. Claim 1 has been amended to recite the features of claim 52 and dependent claims 4, 6, and 8 have been amended to be consistent with the changes to claim 1. Claim 6 has also been

Serial No. 10/689,986

amended to depend from claim 1. Claim 9 has been amended to depend from new claim 56, which depends from claim 1. These changes should be sufficient to place claim 1 and its dependent claims into condition for allowance.

Claim 17 has been amended to recite the features of claim 25 and dependent claims 20 and 27 have been amended to be consistent with the changes to claim 17. As a result, claim 17 and its dependent claims are in condition for allowance.

Claim 33 has been amended to recite the features of claim 39 and dependent claims 36, 40, and 41 have been amended to be consistent with the changes to claim 33. As a result, claim 33 and its dependent claims are in condition for allowance.

Claim 49 has been re-written into independent form and claim 50 has been amended to depend from claim 40. As a result, claim 49 and its dependent claims are in condition for allowance.

III. The Rejection under 35 USC § 102.

Claims 1-4, 6-8, 14, 15, 17-20, 22-24, 30, 31, 33-38, 44-48, 50, 51, and 53-55 were rejected for being anticipated by the Tsuda application. Most of these claims have been amended to place them into condition for allowance. The rejection of the remaining claims is traversed for the following reasons.

Serial No. 10/689,986

Claim 15 recites a method for suppressing noise in a frequency generator, comprising modulating a reference signal and generating a frequency signal from a PLL based on the modulated reference signal. Modulating the reference frequency generates a frequency separation between harmonics of the modulated reference signal and the reference signal that suppresses noise in the frequency signal. In addition to these features, claim 15 further recites that the modulated reference signal is used to generate the frequency signal from the PLL "as long as the harmonics of the modulated reference signal are not coincident with the harmonics of the reference signal." (See, for example, Figs. 5a and 5b for support. These features were presented in Applicants' previous response and considered by the Examiner and therefore do not raise any new issues.)

The Tsuda application does not disclose or suggest modulating a reference signal in a way that satisfies this "as long as" condition in claim 15. The Tsuda application discloses a technique for reducing noise in a phase-locked loop. As shown in Fig. 1, the PLL includes a loop circuit formed from a phase detector 1, a charge pump 2, a low pass filter 3, a voltage-controlled oscillator 4, and a feedback loop which includes a divider circuit 5. A control circuit 6 controls the feedback divider value, and a modulator circuit 7 modulates an input reference signal into the phase detector. Unlike the claimed invention, Tsuda does not disclose controlling the output of its PLL based on any coincidence between harmonics of the modulated and unmodulated reference signals.

Serial No. 10/689,986

More specifically, the Tsuda application discloses that modulator 7 generates a modulated reference signal in a way that shifts a noise (or beat) component outside the pass band of the low pass filter. (See paragraph [0086]). However, Tsuda does not disclose that that the modulated reference signal output from modulator 7 is used to generate the frequency signal from the PLL "as long as the harmonics of the modulated reference signal are not coincident with the harmonics of the reference signal."

Absent a disclosure of these features, it is respectfully submitted that claim 15 cannot be anticipated by the Tsuda application. It is further submitted that the foregoing differences are sufficient to render claim 15 non-obvious and thus patentable over Tsuda.

Claim 31 recites features similar to those which patentably distinguish claim 15 from the Tsuda application. For example, claim 31 recites that "the PLL generates the frequency signal using the modulated reference signal as long as the harmonics of the modulated reference signal are not coincident with the harmonics of the reference signal." The Tsuda application does not disclose or suggest these features, and therefore it is submitted that claim 31 is allowable over Tsuda.


Reconsideration and withdrawal of all the rejections and objections made by the Examiner is hereby respectfully requested.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of the application is respectfully requested.

Serial No. 10/689,986

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with this application, including extension of time fees, to Deposit Account No. 16-0607 (Attorney Docket No. GCTS-29) and credit any excess fees to the same Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mark L. Fleshner', is written over a horizontal line.

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